



18500 Von Karman Avenue, #1100  
Irvine, CA 62612  
T: 714.730.7600

September 12, 2022

John Robles  
Project Manager  
City of Upland – Public Works Department  
1370 N. Benson Avenue  
Upland, CA 91786

**Subject: Agreement for the 2022 Water and Recycled Water System Master Plan Update**

Dear Mr. John Robles:

Please find two (2) signed copies of the professional services agreement for the City of Upland's (City's) 2022 Water and Recycled Water System Master Plan Update (Master Plan Update) enclosed. As part of the signed agreements provided, Brown and Caldwell (BC) would like to respectfully acknowledge the following:

**Insurance Requirements (Section 11):**

- 11.a(ii)(1): "Insurance Services Office Commercial General Liability coverage (Occurrence Form CG 00 01):
  - *Acknowledgement: The only exact equivalent would be the CG 00 01, itself. BC's carrier will provide the Hartford coverage form, which provides coverage at least as broad as the CG 00 01.*
- 11a(v): "The policy shall give City, its officials, officers, employees, agents and City designated volunteers additional insured status using ISO endorsement forms CG 20 10 10 01 and 20 37 10 01, or endorsements providing the exact same coverage:
  - *Acknowledgement: Carrier will not provide 10/01 (or earlier) equivalents, which include coverage for the additional insured's sole liability. Rather, carrier will provide endorsements providing coverage at least as broad as later revisions of the CG2010 (ongoing ops) / 2037 (completed ops).*
- 11e(ii). Minimum Policy Limits Required, para (ii), Defense costs shall be payable in addition to the limits:
  - *Acknowledgement: As is typical for design consultants' professional liability policies, defense costs are inside the policy limits.*
- 11f: Evidence Required:
  - *Acknowledgement: We will provide applicable pages if required to provide copies of endorsements.*
- 11h(i)(1): Qualifying Insurers, para (i) (1), line 2:
  - *Acknowledgement: Lloyds of London, BC's Professional Liability (PL) carrier, is a foreign non-admitted carrier in the U.S. Lloyds is authorized through its syndicates, each of which is included in the most recent Quarterly Listing of Alien Insurers and each of which, thereby, is recognized as an approved surplus lines carrier in California.*



- 11j: Subconsultant Insurance Requirements
  - *Acknowledgement: BC does not have subconsultants for this project. However, in the event that a subconsultant is utilized, The only exact equivalent would be the CG 00 01, itself. Carriers frequently use their own coverage form, provided they include coverage at least as broad as the ISO CG 00 01.*

**Indemnification (Section 12):**

I have been asked to note that California Civil Code Section 2782.8 limits the rights of indemnities to be indemnified by "design professionals." Application of the statute does not depend on whether "design services" have been provided, but rather on whether the services provided were by a "design professional." Section 2(c) of the statute defines "design professional" to include "a business entity offering professional engineering services." Because BC is a business entity offering professional engineering services, we understand Section 2782.8 applies to all of BC's work in California. The statute also provides that the substance of Section 2782.8 may not be waived or modified by contractual agreement.

BC looks forward to partnering with the City to develop the 2022 Water and Recycled Water System Master Plan Update. Please contact Mike Puccio at 714.478.4405 or Amy Martin at 951.313.5242 should you have any questions.

Very truly yours,

**Brown and Caldwell**



Mike Puccio, PE  
Managing Director Area



**CITY OF UPLAND  
PROFESSIONAL SERVICES AGREEMENT**

This Agreement is made and entered into as of September 12, 2022 by and between the City of Upland, a public agency organized and operating under the laws of the State of California with its principal place of business at 460 N. Euclid Avenue, Upland, CA 91786 ("City"), and Brown and Caldwell, a California Corporation with its principal place of business at 18500 Von Karman Avenue, Suite 1100, Irvine, CA 92612 (hereinafter referred to as "Consultant"). City and Consultant are sometimes individually referred to as "Party" and collectively as "Parties" in this Agreement.

**RECITALS**

A. City is a public agency of the State of California and is in need of professional services for the following project:

2022 Water and Recycled Water System Master Plan Update (hereinafter referred to as "the Project").

B. Consultant is duly licensed and has the necessary qualifications to provide such services.

C. The Parties desire by this Agreement to establish the terms for City to retain Consultant to provide the services described herein.

**AGREEMENT**

**NOW, THEREFORE, IT IS AGREED AS FOLLOWS:**

1. Services.

Consultant shall provide the City with the services described in the Scope of Services attached hereto as Exhibit "A."

2. Compensation.

a. Subject to paragraph 2(b) below, the City shall pay for such services in accordance with the Schedule of Charges set forth in Exhibit "B."

b. Except as otherwise set forth in Section 2C the total amount paid for services rendered by Consultant under this Agreement shall not exceed the sum of \$439,878.00. This amount is to cover all printing and related costs, and the City will not pay any additional fees for printing expenses. Periodic payments shall be made within 30 days of receipt of an invoice which includes a detailed description of the work performed. Payments to Consultant for work performed will be made on a monthly billing basis.

c. The City Manager may approve Additional Work, as further defined in Section 3, up to fifty thousand dollars (\$50,000.00). In no event shall the total sum of the agreement (original compensation amount and Additional Work) exceed fifty thousand dollars (\$50,000.00). Any additional work in excess of this amount shall be approved by the City Council.

3. Additional Work.

If changes in the work seem merited by Consultant or the City, and informal consultations with the other party indicate that a change is warranted, it shall be processed in the following manner: a letter outlining the changes shall be forwarded to the City by Consultant with a statement of estimated changes in fee or time schedule. An amendment to this Agreement shall be prepared by the City and executed by both Parties before performance of such services, or the City will not be required to pay for the changes in the scope of work. Such amendment shall not render ineffective or invalidate unaffected portions of this Agreement.

4. Maintenance of Records.

Books, documents, papers, accounting records, and other evidence pertaining to costs incurred shall be maintained by Consultant and made available at all reasonable times during the contract period and for four (4) years from the date of final payment under the contract for inspection by City.

5. Time of Performance.

The term of this Agreement shall be from September 12, 2022, to September 12, 2022, unless earlier terminated as provided herein. The Parties may, by mutual, written consent, extend the term of this Agreement if necessary to complete the Project. Consultant shall perform its services in a prompt and timely manner within the term of this Agreement and shall commence performance upon receipt of written notice from the City to proceed ("Notice to Proceed"). The Notice to Proceed shall set forth the date of commencement of work.

6. Delays in Performance.

a. Neither City nor Consultant shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the non-performing party. For purposes of this Agreement, such circumstances include but are not limited to, abnormal weather conditions; floods; earthquakes; fire; epidemics; pandemics; war; riots and other civil disturbances; strikes, lockouts, work slowdowns, and other labor disturbances; sabotage or judicial restraint.

b. Should such circumstances occur, the non-performing party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement.

7. Compliance with Law.

a. Consultant shall comply with all applicable laws, ordinances, codes and regulations of the federal, state and local government, including Cal/OSHA requirements.

b. If required, Consultant shall assist the City, as requested, in obtaining and maintaining all permits required of Consultant by federal, state and local regulatory agencies.

c. If applicable, Consultant is responsible for all costs of clean up and/ or removal of hazardous and toxic substances spilled as a result of his or her services or operations performed under this Agreement.

8. Standard of Care

Consultant's services will be performed in accordance with generally accepted professional practices and principles and in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

9. Assignment and Subconsultant

Consultant shall not assign, sublet, or transfer this Agreement or any rights under or interest in this Agreement without the written consent of the City, which may be withheld for any reason. Any attempt to so assign or so transfer without such consent shall be void and without legal effect and shall constitute grounds for termination. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement. Nothing contained herein shall prevent Consultant from employing independent associates, and subconsultants as Consultant may deem appropriate to assist in the performance of services hereunder.

10. Independent Contractor

Consultant is retained as an independent contractor and is not an employee of City. No employee or agent of Consultant shall become an employee of City. The work to be performed shall be in accordance with the work described in this Agreement, subject to such directions and amendments from City as herein provided.

a. PERS Eligibility Indemnification

In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement claims or is determined by a court of competent jurisdiction or the California Public Employees Retirement System ("PERS") to be eligible for enrollment in PERS as an employee of the City, Consultant shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing service under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or employee contributions for PERS benefits.

11. Insurance. Consultant shall not commence work for the City until it has provided evidence satisfactory to the City it has secured all insurance required under this section. In addition, Consultant shall not allow any subcontractor to commence work on any subcontract until it has secured all insurance required under this section.

a. Commercial General Liability

(i) The Consultant shall take out and maintain, during the performance of all work under this Agreement, in amounts not less than specified herein, Commercial General Liability Insurance, in a form and with insurance companies acceptable to the City.

(ii) Coverage for Commercial General Liability insurance shall be at least as broad as the following:

(1) Insurance Services Office Commercial General Liability coverage (Occurrence Form CG 00 01) or exact equivalent.

(iii) Commercial General Liability Insurance must include coverage for the following:

- (1) Bodily Injury and Property Damage
- (2) Personal Injury/Advertising Injury
- (3) Premises/Operations Liability
- (4) Products/Completed Operations Liability
- (5) Aggregate Limits that Apply per Project
- (6) Explosion, Collapse and Underground (UCX) exclusion deleted
- (7) Contractual Liability with respect to this Agreement
- (8) Property Damage
- (9) Independent Contractors Coverage

(iv) The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; (3) products/completed operations liability; or (4) contain any other exclusion contrary to the Agreement.

(v) The policy shall give City, its officials, officers, employees, agents and City designated volunteers additional insured status using ISO endorsement forms CG 20 10 10 01 and 20 37 10 01, or endorsements providing the exact same coverage.

(vi) The general liability program may utilize either deductibles or provide coverage excess of a self-insured retention, subject to written approval by the City, and provided that such deductibles shall not apply to the City as an additional insured.

b. Automobile Liability

(i) At all times during the performance of the work under this Agreement, the Consultant shall maintain Automobile Liability Insurance for bodily injury and property damage including coverage for owned, non-owned and hired vehicles, in a form and with insurance companies acceptable to the City.

(ii) Coverage for automobile liability insurance shall be at least as broad as Insurance Services Office Form Number CA 00 01 covering automobile liability (Coverage Symbol 1, any auto).



(iii) The policy shall give City, its officials, officers, employees, agents and City designated volunteers additional insured status.

(iv) Subject to written approval by the City, the automobile liability program may utilize deductibles, provided that such deductibles shall not apply to the City as an additional insured, but not a self-insured retention.

c. Workers' Compensation/Employer's Liability

(i) Consultant certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and he/she will comply with such provisions before commencing work under this Agreement.

(ii) To the extent Consultant has employees at any time during the term of this Agreement, at all times during the performance of the work under this Agreement, the Consultant shall maintain full compensation insurance for all persons employed directly by him/her to carry out the work contemplated under this Agreement, all in accordance with the "Workers' Compensation and Insurance Act," Division IV of the Labor Code of the State of California and any acts amendatory thereof, and Employer's Liability Coverage in amounts indicated herein. Consultant shall require all subconsultants to obtain and maintain, for the period required by this Agreement, workers' compensation coverage of the same type and limits as specified in this section.

d. Professional Liability (Errors and Omissions)

At all times during the performance of the work under this Agreement the Consultant shall maintain professional liability or Errors and Omissions insurance appropriate to its profession, in a form and with insurance companies acceptable to the City and in an amount indicated herein. This insurance shall be endorsed to include contractual liability applicable to this Agreement and shall be written on a policy form specifically designed to protect against acts, errors or omissions of the Consultant. "Covered Professional Services" as designated in the policy must specifically include work performed under this Agreement. The policy must "pay on behalf of" the insured and must include a provision establishing the insurer's duty to defend.

e. Minimum Policy Limits Required

(i) The following insurance limits are required for the Agreement:

Combined Single Limit

Commercial General Liability	\$1,000,000 per occurrence/ \$2,000,000 aggregate for bodily injury, personal injury, and property damage
Automobile Liability	\$1,000,000 combined single limit
Employer's Liability	\$1,000,000 per accident or disease

Professional Liability

\$1,000,000 per claim and aggregate (errors and omissions)

(ii) Defense costs shall be payable in addition to the limits.

(iii) Requirements of specific coverage or limits contained in this section are not intended as a limitation on coverage, limits, or other requirement, or a waiver of any coverage normally provided by any insurance. Any available coverage shall be provided to the parties required to be named as Additional Insured pursuant to this Agreement.

f. Evidence Required

Prior to execution of the Agreement, the Consultant shall file with the City evidence of insurance from an insurer or insurers certifying to the coverage of all insurance required herein. Such evidence shall include original copies of the ISO CG 00 01 (or insurer's equivalent) signed by the insurer's representative and Certificate of Insurance (Acord Form 25-S or equivalent), together with required endorsements. All evidence of insurance shall be signed by a properly authorized officer, agent, or qualified representative of the insurer and shall certify the names of the insured, any additional insureds, where appropriate, the type and amount of the insurance, the location and operations to which the insurance applies, and the expiration date of such insurance.

g. Policy Provisions Required

(i) Consultant shall provide the City at least thirty (30) days prior written notice of cancellation of any policy required by this Agreement, except that the Consultant shall provide at least ten (10) days prior written notice of cancellation of any such policy due to non-payment of premium. If any of the required coverage is cancelled or expires during the term of this Agreement, the Consultant shall deliver renewal certificate(s) including the General Liability Additional Insured Endorsement to the City at least ten (10) days prior to the effective date of cancellation or expiration.

(ii) The Commercial General Liability Policy and Automobile Policy shall each contain a provision stating that Consultant's policy is primary insurance and that any insurance, self-insurance or other coverage maintained by the City or any named insureds shall not be called upon to contribute to any loss.

(iii) The retroactive date (if any) of each policy is to be no later than the effective date of this Agreement. Consultant shall maintain such coverage continuously for a period of at least three years after the completion of the work under this Agreement. Consultant shall purchase a one (1) year extended reporting period A) if the retroactive date is advanced past the effective date of this Agreement; B) if the policy is cancelled or not renewed; or C) if the policy is replaced by another claims-made policy with a retroactive date subsequent to the effective date of this Agreement.

(iv) All required insurance coverages, except for the professional liability coverage, shall contain or be endorsed to provide a waiver of subrogation in favor of the City, its officials, officers, employees, agents, and volunteers or shall specifically allow Consultant or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. Consultant hereby waives its own right of recovery against City,

and shall require similar written express waivers and insurance clauses from each of its subconsultants.

(v) The limits set forth herein shall apply separately to each insured against whom claims are made or suits are brought, except with respect to the limits of liability. Further the limits set forth herein shall not be construed to relieve the Consultant from liability in excess of such coverage, nor shall it limit the Consultant's indemnification obligations to the City and shall not preclude the City from taking such other actions available to the City under other provisions of the Agreement or law.

h. Qualifying Insurers

(i) All policies required shall be issued by acceptable insurance companies, as determined by the City, which satisfy the following minimum requirements:

(1) Each such policy shall be from a company or companies with a current A.M. Best's rating of no less than A:VII and admitted to transact in the business of insurance in the State of California, or otherwise allowed to place insurance through surplus line brokers under applicable provisions of the California Insurance Code or any federal law.

i. Additional Insurance Provisions

(i) The foregoing requirements as to the types and limits of insurance coverage to be maintained by Consultant, and any approval of said insurance by the City, is not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Consultant pursuant to this Agreement, including but not limited to, the provisions concerning indemnification.

(ii) If at any time during the life of the Agreement, any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced, City has the right but not the duty to obtain the insurance it deems necessary and any premium paid by City will be promptly reimbursed by Consultant or City will withhold amounts sufficient to pay premium from Consultant payments. In the alternative, City may cancel this Agreement.

(iii) The City may require the Consultant to provide complete copies of all insurance policies in effect for the duration of the Project.

(iv) Neither the City nor any of its officials, officers, employees, agents or volunteers shall be personally responsible for any liability arising under or by virtue of this Agreement.

j. Subconsultant Insurance Requirements. Consultant shall not allow any subcontractors or subconsultants to commence work on any subcontract until they have provided evidence satisfactory to the City that they have secured all insurance required under this section. Policies of commercial general liability insurance provided by such subcontractors or subconsultants shall be endorsed to name the City as an additional insured using ISO form CG 20 38 04 13 or an endorsement providing the exact same coverage. If requested by Consultant,

City may approve different scopes or minimum limits of insurance for particular subcontractors or subconsultants.

12. Indemnification.

a. To the fullest extent permitted by law, Consultant shall defend (with counsel of City's choosing), indemnify and hold the City, its officials, officers, employees, volunteers, and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, in any manner arising out of, pertaining to, or incident to any acts, errors or omissions, or willful misconduct of Consultant, its officials, officers, employees, subcontractors, consultants or agents in connection with the performance of the Consultant's services, the Project or this Agreement, including without limitation the payment of all damages, expert witness fees and attorney's fees and other related costs and expenses. Consultant's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by Consultant, the City, its officials, officers, employees, agents, or volunteers.

b. If Consultant's obligation to defend, indemnify, and/or hold harmless arises out of Consultant's performance of "design professional" services (as that term is defined under Civil Code section 2782.8), then, and only to the extent required by Civil Code section 2782.8, which is fully incorporated herein, Consultant's indemnification obligation shall be limited to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant, and, upon Consultant obtaining a final adjudication by a court of competent jurisdiction, Consultant's liability for such claim, including the cost to defend, shall not exceed the Consultant's proportionate percentage of fault.

13. California Labor Code Requirements.

a. Consultant is aware of the requirements of California Labor Code Sections 1720 et seq. and 1770 et seq., which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects ("Prevailing Wage Laws"). If the services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is \$1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws. Consultant shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. It shall be mandatory upon the Consultant and all subconsultants to comply with all California Labor Code provisions, which include but are not limited to prevailing wages (Labor Code Sections 1771, 1774 and 1775), employment of apprentices (Labor Code Section 1777.5), certified payroll records (Labor Code Sections 1771.4 and 1776), hours of labor (Labor Code Sections 1813 and 1815) and debarment of contractors and subcontractors (Labor Code Section 1777.1). The requirement to submit certified payroll records directly to the Labor Commissioner under Labor Code section 1771.4 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Section 1771.4.

b. If the services are being performed as part of an applicable "public works" or "maintenance" project, then pursuant to Labor Code Sections 1725.5 and 1771.1, the Consultant and all subconsultants performing such services must be registered with the Department of Industrial Relations. Consultant shall maintain registration for the duration of the

Project and require the same of any subconsultants, as applicable. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

c. This Agreement may also be subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be Consultant's sole responsibility to comply with all applicable registration and labor compliance requirements. Any stop orders issued by the Department of Industrial Relations against Consultant or any subcontractor that affect Consultant's performance of services, including any delay, shall be Consultant's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Consultant caused delay and shall not be compensable by the City. Consultant shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the Department of Industrial Relations against Consultant or any subcontractor.

14. Verification of Employment Eligibility.

By executing this Agreement, Consultant verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be amended from time to time, and shall require all subconsultants and sub-subconsultants to comply with the same.

15. Reserved.

16. Laws and Venue.

This Agreement shall be interpreted in accordance with the laws of the State of California. If any action is brought to interpret or enforce any term of this Agreement, the action shall be brought in a state or federal court situated in the County of San Bernardino, State of California.

17 Termination or Abandonment

a. City has the right to terminate or abandon any portion or all of the work under this Agreement by giving ten (10) calendar days written notice to Consultant. In such event, City shall be immediately given title and possession to all original field notes, drawings and specifications, written reports and other documents produced or developed for that portion of the work completed and/or being abandoned. City shall pay Consultant the reasonable value of services rendered for any portion of the work completed prior to termination. If said termination occurs prior to completion of any task for the Project for which a payment request has not been received, the charge for services performed during such task shall be the reasonable value of such services, based on an amount mutually agreed to by City and Consultant of the portion of such task completed but not paid prior to said termination. City shall not be liable for any costs other than the charges or portions thereof which are specified herein. Consultant shall not be entitled to payment for unperformed services, and shall not be entitled to damages or compensation for termination of work.

b. Consultant may terminate its obligation to provide further services under this Agreement upon thirty (30) calendar days' written notice to City only in the event of substantial

failure by City to perform in accordance with the terms of this Agreement through no fault of Consultant.

18. Documents. Except as otherwise provided in "Termination or Abandonment," above, all original field notes, written reports, Drawings and Specifications and other documents, produced or developed for the Project shall, upon payment in full for the services described in this Agreement, be furnished to and become the property of the City.

19. Organization

Consultant shall assign Amy Martin as Project Manager. The Project Manager shall not be removed from the Project or reassigned without the prior written consent of the City.

20. Limitation of Agreement.

This Agreement is limited to and includes only the work included in the Project described above.

21. Notice

Any notice or instrument required to be given or delivered by this Agreement may be given or delivered by depositing the same in any United States Post Office, certified mail, return receipt requested, postage prepaid, addressed to:

CITY:

City of Upland

460 N. Euclid Avenue

Upland, CA 91786

Attn: Public Works Director |

CONSULTANT:

Brown and Caldwell

18500 Von Karman Avenue, Suite 1100

Irvine, CA 92612

Attn: Amy Martin |

and shall be effective upon receipt thereof.

22. Third Party Rights

Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the City and the Consultant.

23. Equal Opportunity Employment.

Consultant represents that it is an equal opportunity employer and that it shall not discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, sex, age or other interests protected by the State or Federal Constitutions. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination.

24. Entire Agreement

This Agreement, with its exhibits, represents the entire understanding of City and Consultant as to those matters contained herein, and supersedes and cancels any prior or contemporaneous oral or written understanding, promises or representations with respect to those matters covered hereunder. Each Party acknowledges that no representations, inducements, promises or agreements have been made by any person which are not incorporated herein, and that any other agreements shall be void. This Agreement may not be modified or altered except in writing signed by both Parties hereto. This is an integrated Agreement.

25. Severability

The unenforceability, invalidity or illegality of any provision(s) of this Agreement shall not render the remaining provisions unenforceable, invalid or illegal.

26. Successors and Assigns

This Agreement shall be binding upon and shall inure to the benefit of the successors in interest, executors, administrators and assigns of each Party to this Agreement. However, Consultant shall not assign or transfer by operation of law or otherwise any or all of its rights, burdens, duties or obligations without the prior written consent of City. Any attempted assignment without such consent shall be invalid and void.

27. Non-Waiver

None of the provisions of this Agreement shall be considered waived by either Party, unless such waiver is specifically specified in writing.

28. Time of Essence

Time is of the essence for each and every provision of this Agreement.

29. City's Right to Employ Other Consultants

City reserves its right to employ other consultants, including engineers, in connection with this Project or other projects.

30. Prohibited Interests

Consultant maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no director, official, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

**[SIGNATURES ON FOLLOWING PAGE]**

**SIGNATURE PAGE FOR PROFESSIONAL SERVICES AGREEMENT  
BETWEEN CITY OF UPLAND  
AND BROWN AND CALDWELL**

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first written above.

CITY OF UPLAND

By: \_\_\_\_\_

Michael Blay  
City Manager

BROWN AND CALDWELL

By: \_\_\_\_\_

Michael Roccio

Its: \_\_\_\_\_

Vice President

Printed Name: Michael Roccio

ATTEST:

By: \_\_\_\_\_

Keri Johnson  
City Clerk

By: \_\_\_\_\_

Its: \_\_\_\_\_

Printed Name: \_\_\_\_\_



## EXHIBIT A

### Scope of Services

#### TASK 1: PROJECT MANAGEMENT, COORDINATION, AND MEETINGS

##### TASK 1.1 | PROJECT MANAGEMENT & COORDINATION

This task includes managing the project team to track time and budget, work elements accomplished, work items planned for the next period, and budget needed to complete the project. This task also includes the preparation of monthly progress reports that will include the status of tasks, summary of budget, potential issues or concerns, and next steps. The effort of this task is based on a twelve (12) month project duration. In addition, BC will prepare a detailed project schedule with pertinent milestones for all tasks and subtasks. The first schedule and workflow plan will be presented at the kickoff meeting and will be updated on an as-needed basis.

##### TASK 1.2 | PROGRESS MEETINGS

BC will attend up to twelve (12) virtual progress meetings (including the kick-off meeting). An agenda will be provided prior to the progress meetings and notes will be prepared and provided to the City after the meeting. In addition, a detailed action item and decision log will be maintained throughout the project to facilitate smooth project execution and clearly delineate responsibilities and deadlines. It is assumed that progress meetings will be two (2) hours in duration.

##### TASK 1.3 | CITY COMMITTEE, COUNCIL, OR WORKSHOPS

BC will coordinate and attend up to four (4) in-person City Committee, Council, or Workshop meetings. An agenda and notes will be prepared and provided to the City after the meeting. It is assumed that workshops and City Council meetings will be up to four (4) hours in duration. In addition, in preparation for the City Council meetings, a Power Point presentation will be prepared.

##### TASK 1.4 | QUALITY ASSURANCE AND QUALITY CONTROL

BC will perform QA/QC at key milestones throughout the project. Submittals to the City shall include a cover sheet signed by QA/QC lead indicating that a review was completed and the submittal is satisfactory for delivery to the City. Deliverables for Task 1: Agendas, Meeting Notes, Action & Decision Log, Schedule Updates, City Council Power Point Presentations, Monthly Progress Reports, and QA/QC Cover Sheets

#### TASK 2: RESEARCH AND DATA ACQUISITION

##### TASK 2.1 | DATA COLLECTION LIST AND UPDATES

BC will prepare a prioritized data collection list to track the status of various documents and coordinate with the City to identify a centralized location to share data, such as, a SharePoint site.

## TASK 2.2 | DATA COLLECTION AND REVIEW

BC will collect and perform a cursory review the City's relevant planning documents provided in the RFP as well as the latest hydraulic models, GIS, customer billing data, general plan land-use information, demand forecasting studies, feasibility studies, record drawings, and any other pertinent data. The in-depth evaluation of information under subsequent tasks.

Deliverables for Task 2: Data Collection List

## TASK 3: SUPPLY ANALYSIS

### TASK 3.1 | SUMMARIZE HISTORICAL SUPPLY DATA AND WATER RIGHTS

BC will summarize historical supply data from the previous 5-years by supply source and rights to the supply source. It is assumed that BC will build upon data listed in the City's 2020 Urban Water Management Plan (UWMP) and that production (by source) will be provided in a usable format. Sources will include imported water, groundwater (Six Basins and Chino Basin), purchased water (SAWCo and WECWC), and recycled water. The following information will be summarized in a table and graph and documented in the Master Plan Update.

### TASK 3.2 | SUMMARIZE WATER QUALITY IMPACTS AND TREATMENT NEEDS

BC will summarize the water quality impacts by supply source, which will be based on information provided in the City's 2010 Water Master Plan, 2020 UWMP, and data provided by City staff in a useable format. A summary table will be prepared (similar to Table 5.3 in the 2010 Master Plan). If a supply source is impacted by a water quality impact, a planning level assessment will be performed to identify if proposed treatment needs, blending opportunities, or replacement of the well based on age and performance to identify the best next step to maximize the use of the supply.

As part of this effort, BC will identify current and future potable water quality regulations that are impacting or may impact the future water system. It is assumed that City staff will provide input on potential issues that the City has faced relating due to water quality, or other similar concerns.

### TASK 3.3 | DEVELOP PROJECTED SUPPLY NEEDS THROUGH BUILDOUT

A mass balance will be performed that compares the projected demands against the proposed supplies by pressure zone. This will assist in identifying the need to add additional local supply alternatives to maximize reliability and resiliency due to the uncertainty of imported water supplies.

#### TASK 3.4 | PERFORM SUPPLY RELIABILITY ANALYSIS

BC will perform a reliability analysis that considers impacts to water quality (based on existing water quality issues and future regulatory changes) loss of imported water, and drought impacts. Opportunities to maximize the use of local supplies through groundwater recharge or operational flexibility for supply optimization will be considered. For budgeting purposes, up to three (3) outage or supply reduction scenarios will be performed to assess future supply needs. The analysis will be summarized in tables and will be compared with future demand conditions and will consider conservation and recycled water offsets, which were previously not established or known during the development of the 2010 Water Master Plan.

#### TASK 3.5 | DRAFT EXISTING AND FUTURE SUPPLY REPORT SECTIONS

BC will build upon the 2010 Water Master Plan Report and consolidate information and analysis performed under Task 3.1 through 3.4 to draft the existing and future supply report sections. The deliverable will be provided under Task 8. Deliverables for Task 3: Summary Tables of Existing & Projected Supplies by Source, Water Quality Impacts (Existing and Future), and Reliability Analysis (electronic copy for discussion with City)

#### TASK 4: DEMAND ANALYSIS

##### TASK 4.1 | SUMMARIZE HISTORICAL DEMAND DATA

Historical demand data will be compiled and summarized from the previous 5-years. It is assumed that the City will provide data in a usable format. If data is available (and provided by the City), demands will be summarized by pressure zone. The historical summary will include: Unaccounted-for-Water - BC will review historical consumption data to establish the unaccounted-for-water factor consistent with the AWWA guidelines. Seasonal Peaking Factors - Historical billing data will be used to develop system-wide seasonal peaking factors for minimum day demands (minDD), maximum month demands (MMD), peak hour demand (PHD), and maximum day demands (MDD). Data will be summarized in a table and graphic format and documented within the Master Plan Update.

##### TASK 4.2 | UPDATE LAND USE PROJECTIONS

BC will use the City's 2020 UWMP, GIS, general plan, and current zoning map as well as other pertinent planning documents and discussions with the City's development staff to describe the current and proposed land uses within the City's service area. The acreage for each land use

classification will be summarized for use in the water demand projections. A GIS map will be prepared for discussion purposes. A 2-hour workshop with the City's planning staff will be performed to identify proposed developments, timing of developments, and impacts related to Regional and Housing Needs Assessment (RHNA). The following assumptions will be documented and utilized as a baseline for the demand projections through buildout (or by 2045). BC will also update the population projections presented in the 2020 UWMP by using the U.S. Census Bureau population projections by census tract and/or projected rate-of-growth as estimated by other available data within the San Bernardino County region. Populations will be projected in 5-year increments through buildout (or by 2045).

#### TASK 4.3 | EVALUATE CONSERVATION PROGRAMS AND OPPORTUNITIES

BC will summarize existing conservation programs and needs (or benchmarks) based on the supply reliability analysis performed as well as considerations regarding the potential changes to indoor water use based on upcoming legislation. The City's 2020 UWMP will be used to document the City's existing and future conservation program initiatives. This includes the City's involvement with the Regional Alliance, which is led by Inland Empire Utilities Agency (IEUA). The evaluation and opportunities will be discussed with the City and documented in the Master Plan Update and provided to the City under Task 8.

#### TASK 4.4 | RECYCLED WATER REGULATORY FRAMEWORK AND ALTERNATIVES

BC will develop a table that summarizes existing and future recycled water regulatory framework that will be used to assess existing and future recycled water opportunities. The City's 2008 Recycled Water Master Plan as well as the latest planning reports and studies will be used to assess the best use of the City's recycled water. For budgeting purposes, up to three (3) alternatives will be considered. This includes expanding the recycled water system, opportunities to maximize groundwater recharge, or a hybrid approach. The results and recommendations will be documented in the Master Plan Update and provided to the City under Task 8.

#### TASK 4.5 | SUMMARIZE PROJECTED DEMANDS AND OFFSETS

Utilizing the City's latest billing data and land use changes identified under Task 4.2, a land use based demand projection will be developed in 5-year increments through buildout (or 2045). BC will build upon the information listed in the City's 2020 UWMP and include demand offsets (conservation and recycled water opportunities). It is assumed that the conservation offsets will be based on existing reports, planning studies, and assumptions used IEUA's Land Use Based Demand Model (climate change impacts and passive conservation). The proposed recycled water offsets will be based on the evaluation performed under Task 4.4. BC has proposed an alternative approach to evaluate conservation offsets or scenarios, which is included under the optional tasks listed in Task 9. For the land use based approach, BC will update the unit demand factors that

were developed as part of the 2020 UWMP. The factors will be based on the City's latest consumption patterns by land use type and will be applied to future land use identified under Task 4.2 and approved developer studies.

#### TASK 4.6 | DRAFT EXISTING AND FUTURE DEMAND REPORT SECTIONS

BC will build upon the 2010 Water Master Plan Report and consolidate information and analysis performed under Task 4.1 through 4.5 to draft the existing and future demand analysis report sections. The deliverable will be provided under Task 8.

Deliverables for Task 4: Summary Tables of Existing & Projected Demand, Conservation and Demand Offset Impacts (Existing and Future), Regulatory Framework, and Recycled Water Opportunities (electronic copy for discussion with City)

#### TASK 5: WATER SYSTEM MODEL

##### TASK 5.1 | UPDATE HYDRAULIC MODEL AND WORKSHOP

###### GIS and Model Update

As part of this effort, BC will update the City's GIS using ArcGIS Pro and convert the City's existing hydraulic model from InfoWater to InfoWater Pro. BC will perform a data check to determine if there are any data discrepancies or inconsistencies between the GIS and model. It is assumed that updates will include new infrastructure installed after the development of the 2010 Water Master Plan. It is assumed that the City will provide the latest model and coordinate with BC staff to identify any updates or system changes made to the model since the last update and will include pipeline replacements, new or planned infrastructure, and all pipelines 4-inches in diameter and larger. The proposed changes will be discussed during a virtual 2-hour Modeling Update Workshop before incorporating the edits into the hydraulic model. For budgeting purposes, up to 32 hours has been included to update the GIS and model to reflect the City's latest system. If additional time is required after an initial review of the GIS and model is performed, BC will coordinate with the City and discuss before proceeding. BC also has the capability to set up the model to use InfoWater's GIS Gateway, which allows for updating model piping directly from GIS. This option can be discussed with City staff. For data on storage facilities, pump stations, and PRVs, any available information provided by the City will be compared to the previous model to confirm that they are being accurately represented. If information is lacking, BC will work with City staff to verify facility information.

###### Water Demand Allocation

Existing demands will be allocated within the hydraulic model to obtain a spatial distribution of the demands, which will be based on a review of parcel, billing, and water use data. Demand sets for potable water offsets due to the use of recycled water, water loss, and conservation will be incorporated for both the existing and buildout (or 2045) scenarios.

##### TASK 5.2 | DRAFT AND FINAL CALIBRATION PLAN AND FIELD TESTING

A draft and final calibration plan will be developed, which will describe field work to be done to collect data for model calibration. BC typically implements a two-pronged approach for model calibration: operational calibration and field calibration. The plan will describe field testing locations, data to be collected during testing, and the help required from City staff. BC will assist in the field testing, owns field testing equipment, and has developed forms in a data collection application for field testing. The draft calibration plan will be discussed with City staff to confirm locations. Once locations are confirmed, a 2-day field visit will be scheduled with City staff to perform necessary testing. It is assumed that the City staff will assist in the field testing and that up to 16 fire flow tests can be performed over the 2-day period.

### TASK 5.3 | MODEL CALIBRATION AND WORKSHOP

#### Diurnal Patterns

Diurnal patterns for the City's entire water system will be developed to represent the hourly demand fluctuations on the selected calibration day as well diurnal curves for individual pressure zones (if data is available).

#### Operational Calibration

Operational calibration includes comparing model tank, pump, and valve operations with SCADA data. Operational calibration confirms that the model operates correctly for day-to-day (extended period simulation) operations. Calibration will include adjusting pump, tank, and valve settings and controls until model results match flows and pressures from SCADA data. Input from discussions with the City's engineering and operations staff will be important in this step.

#### Field Calibration

The field calibration involves performing hydrant flow tests throughout the water system and comparing flow and pressure field results to model results. Hydrant tests are used when calibrating model C factors. In addition, hydrant tests are very effective at identifying issues including unknown closed valves, open valves at pressure zone boundaries, and wrong piping in the GIS. The calibrated model will be used as the foundation for the evaluation of existing and future conditions

Results from the Operational and Field Calibration will be summarized and presented to City staff during a virtual Operations Workshop. The final results will be compiled and included in the Draft and Final Modeling Technical Memorandum under Task 5.5 and included as an appendix in the Master Plan Report.

### TASK 5.4 | DEVELOP EXISTING AND BUILDOUT SCENARIOS IN MODEL

The calibrated model will be used as a baseline when setting up both the existing and buildout scenarios (or 2045) in the hydraulic model. The demand projections developed under Task 4 will be used when developing the buildout scenario. The system analysis will be performed under Task 6, which will identify the need for existing and future facilities. These facilities will be added into the model under Task 6.

## TASK 5.5 | DRAFT AND FINAL MODELING TECHNICAL MEMORANDUM

A Draft and Final Modeling TM will be developed to summarize the work completed as part of Task 5.1 through 5.4. the TM will include a summary of the updates made in the hydraulic model, demand sets developed, calibration activities, and tables/graphs/figures that document the accuracy of the model calibration results.

## TASK 5.6 | HYDRAULIC MODELING SOFTWARE

(TASK REMOVED)

## TASK 5.7 | MODEL TRAINING

Upon completion of the model and Master Plan Update, a 2-day training will be scheduled with City staff using InfoWater Pro. It is assumed that the City will provide workstations and licenses for the training. A copy of the final model will be provided for the City's future use. Deliverables for Task 5: Draft & Final Calibration Plan (electronic copy), Power Points for Model Update Workshop and Model Calibration Workshop, Draft & Final Modeling TM (electronic copy), software licenses (REMOVED), and the Final Water Model in InfoWater Pro

## TASK 6: SYSTEM IMPROVEMENTS/RECOMMENDATIONS

### TASK 6.1 | REVIEW AND UPDATE EVALUATION CRITERIA

The system sizing and evaluation criteria from the City's 2010 Master Plan will be reviewed and compared with industry standards to assess recommendations on revisions to these criteria. Changes to the criteria will be summarized in a table and provided to City staff for review prior to performing system analysis.

### TASK 6.2 | EXISTING CAPACITY EVALUATION OF WATER SYSTEM

The calibrated hydraulic model developed under Task 5 will be used to perform an existing system evaluation to identify areas that do not meet the minimum pressure, velocity, or fire flow requirement. The model will be used to size improvements to meet the criteria. Prior to performing the fire flow analysis, BC will confirm that hydrants are assigned to the correct pipeline. Deficiencies identified will be discussed with City staff in a progress meeting, which is budgeted under Task 1. The model and GIS figures will be used to demonstrate the results and recommended improvements to mitigate deficiencies. The 2010 Master Plan recommendations will be compared with the recommendations identified as part of Task 6.2. The figures will be included in the Master Plan Update under Task 8.

### TASK 6.3 | BUILDOUT CAPACITY EVALUATION OF WATER SYSTEM

The calibrated hydraulic model developed under Task 5 will be used to perform a future system evaluation to identify areas that do not meet the minimum pressure, velocity, or fire flow requirement. It is assumed that buildout will occur by 2045, unless otherwise noted by the City. The model will be used to size improvements to meet the criteria. Deficiencies identified will be discussed with City staff in a progress meeting, which is budgeted under Task 1. The model and GIS figures will be used to demonstrate the results and recommended improvements to mitigate deficiencies. The combined improvements that are related to existing deficiencies and growth will be identified by a percent split when developing the CIP as part of Task 7. The figures will be included in the Master Plan Update under Task 8.

#### TASK 6.4 | EXISTING AND BUILDOUT PUMP STATION AND STORAGE ANALYSIS

##### Existing Storage and Pump Station Analysis

Develop an existing storage and pumping mass balance table, which will incorporate any updates to the evaluation criteria and identify the project trigger (changes in land use, demands, criteria, condition, etc.). Opportunities to create reliability and redundancy will be considered when identifying improvement projects to mitigate deficiencies.

##### Future Storage and Pump Station Analysis

Develop a future storage and pumping mass balance table, which will incorporate any updates to the evaluation criteria and identify the project trigger (changes in land use, growth, criteria, condition, etc.). Opportunities to create reliability and redundancy will be considered when identifying improvement projects to mitigate deficiencies.

#### TASK 6.5 | CONDITION ASSESSMENT DATA REVIEW AND FIELD VISIT

This task will include a review of existing condition assessment and operations/maintenance reports to identify upcoming replacement projects that should be considered within the capital improvement plan. It is assumed that the rehabilitation and replacement of the facilities is based on the latest industry standards and input from City staff. This does include a 2-day cursory field visit and the development of field notes to summarize conversations with City staff and identify issues through a visual inspection. BC will coordinate with the City staff to identify projects that will be included in the CIP and summarize subsequent condition assessments that may be required to maintain system reliability. The field notes will be included in an appendix within the Master Plan Update under Task 8.

If the City would like to include a pipeline replacement strategy, a scope of work and fee estimate will be provided. BC has the tools and techniques to tailor the strategy and the level of detail can vary based on available data or needs.

#### TASK 6.6 | LIST OF PROPOSED IMPROVEMENTS PROJECTS AND FIGURE

BC will summarize the City's existing and future system deficiencies and condition related improvements in a table format and will include both water and recycled water, which will be discussed with City staff prior to developing the prioritized CIP. The improvements will include



pipeline replacements due to capacity deficiencies, pump station and storage improvements (based on capacity and condition), well rehab or replacement (based on input from City staff and the analysis performed under Task 3), as well as other relevant projects that have been included in the City's existing CIP. Pipelines or other facilities within the distribution system that have has known operational issues will be discussed and included within the list as needed. A consolidated figure that identifies the capacity deficiencies (pipelines/pump stations/storage tanks/wells) will be developed for discussion purposes with City staff.

#### TASK 6.7 | DRAFT EXISTING AND SYSTEM ANALYSIS SECTIONS

BC will build upon the 2010 Water Master Plan Report and consolidate information and analysis performed under Task 6.1 through 6.6 to draft the existing and future system analysis report sections. The deliverable will be provided under Task 8.

Deliverables for Task 6: Evaluation Criteria Table (electronic copy for discussion with City staff), Existing and Future System Analysis GIS Figures (electronic copies for discussion with City staff), Existing and Future Storage and Pump Station Analysis Tables (electronic copies for discussion with City staff), and List of Project Improvements and Figure (electronic copies for discussion with City staff)

#### TASK 7: SYSTEM MAINTENANCE/REPLACEMENT PROGRAM

##### TASK 7.1 | UPDATE COST ASSUMPTIONS AND UNIT COSTS

BC will develop planning-level (Class 5 per AACE International) cost estimating assumptions for the water system facilities within the distribution system. These unit costs will reflect the most current market conditions in the region (Los Angeles County and City projects). BC will coordinate with City staff on current bid results that may be used to adjust unit costs. BC will estimate cost escalation from sources such as historical cost trends from the ENR Index Los Angeles Area. In addition, a table with typical contingency and mark-up cost factors will be prepared. The cost development and amortization assumptions will be discussed and finalized with the City staff prior to the development of the CIP.

##### TASK 7.2 | DRAFT AND FINAL PRIORITIZED CIP TABLE

BC will develop Class 5 planning-level cost estimates for each of the recommended CIP identified under Task 6.6. The cost estimates will be summarized in tabular format by project ID, facility type, and priority. A GIS map will be prepared to depict the locations of the proposed system improvements with matching project IDs.

A Draft and Final CIP table will group projects into the near-term and long-term planning horizons. The near-term and long-term will be selected through discussions with City staff. Higher priority projects will be included within the near-term and will be distributed on an annual or yearly basis. Long-term projects will be grouped since the timing is unknown.

##### TASK 7.3 | DRAFT CIP CHAPTER (WATER AND RECYCLED WATER)

BC will build upon the 2010 Water Master Plan Report and consolidate information developed as part of Task 7.1 and Task 6.2 to draft the CIP report chapter. The deliverable will be provided under Task 8 and will include the graphs, tables, and figures developed as part of Task 6 and Task 7.

Deliverables for Task 7: Draft & Final CIP Table (electronic copy and included in Master Plan Report)

## TASK 8: SUBMITTALS – MASTER PLAN REPORT

### TASK 8.1 | 60% MASTER PLAN

BC will compile the work performed in previous subtasks under Task 2 through Task 6 into master plan report chapters. It is assumed that the 60% Master Plan will include the following: Chapter 1 – Introduction, Chapter 2 – Land Use and Population, Chapter 3 – Demand Projections, and Chapter 4 –

Evaluation Criteria. The report will build upon the City's 2010 Master Plan and will provide clear rationale for the basis of planning tasks that will be used to perform the system analysis. An electronic copy and three (3) hard copies will be submitted to City staff for review and comment. It is assumed that the City will provide comments within two weeks.

Deliverables for Task 8.1: 60% Master Plan (electronic copy and 3 hard copies)

### TASK 8.2 | 85% MASTER PLAN

BC will compile the work performed in previous subtasks under Task 2 through Task 6 into master plan report chapters. It is assumed that the 85% Master Plan will include the following: Chapter 5 – Potable Water System Analysis, Chapter 6 – Recycled Water Evaluation, and Draft CIP Table. The report will build upon the City's 2010 Master Plan and will provide clear rationale for the system analysis tasks that will be used to develop the prioritized CIP. An electronic copy and three (3) hard copies will be submitted to City staff for review and comment. It is assumed that the City will provide comments within two weeks.

Deliverables for Task 8.2: 85% Master Plan (electronic copy and 3 hard copies)

### TASK 8.3 | DRAFT MASTER PLAN

BC will incorporate the comments received from City staff on Task 8.1 and 8.2 and compile the Draft Master Plan Report. It is assumed that the Draft Master Plan will include the following: Draft Executive Summary, revisions to Chapter 1 through Chapter 6, Chapter 7 – Capital Improvement Plan, and supporting appendices. An electronic copy and three (3) hard copies will be submitted to City staff for review and comment. It is assumed that the City will provide comments within two weeks.

Deliverables for Task 8.3: Draft Master Plan (electronic copy and 3 hard copies)

#### TASK 8.4 | FINAL MASTER PLAN

BC will incorporate the comments received from City staff on Task 8.3. It is assumed that the Final Master Plan will incorporate all final comments received from City staff on the Executive Summary, Chapter 1 through Chapter 7, and supporting appendices. An electronic copy and ten (10) hard copies will be submitted to City staff.

Deliverables for Task 8.4: Final Master Plan (electronic copy and 10 hard copies)

#### TASK 9: OPTIONAL TASKS

##### TASK 9.1 | DSS DEMAND PROJECTION TOOL

Our supplemental approach to the City's demand projections includes the use of a dynamic forecasting tool called the "Least Cost Planning Decision Support System Model" (DSS Model) to help navigate the uncertainties of water demand forecasting and provide confidence in the basis of our planning. The tool follows the methodologies specified in the AWWA Manual of Water Supply Practices M52, which is considered the industry standard for conservation and demand forecasting. BC is a licensed user of the tool. We will collaborate with City staff at scheduled progress meetings to discuss demand forecasting. During these meetings, a review of the DSS Model will be performed so that City staff feel comfortable and confident with the selected demand forecast since it is one of the key foundations for comprehensive and integrated master plans. This task will include two (2) meetings with City staff to discuss the following items: quantifying the impact of future planned conservation efforts, quantifying (to the extent possible) the impact of climate change and climate variability, quantify the impact of recycled water, review uncertainty of redevelopment and future population projections provided by the State, select demand scenarios to model, and results. This methodology inputs population data into the DSS Model and compares the results at varying levels of conservation.

The DSS demand tool will provide a range that can be used to assess future supply needs with varying conditions. This will help the City establish conservation targets and identify future supply needs to increase system reliability and resiliency. As growth evolves and development agreements are established over time, the DSS model can be updated, and demands can be refined. If this option is selected, the baseline target will be used to perform the future system analysis under Task 6.

Deliverables for Task 9.1: Table with Demand Projection Results (electronic format)

##### TASK 9.2 | STORY MAP

Since hard copies can be challenging to use when cross sharing information, BC proposes the use of an ESRI StoryMap. StoryMaps will allow the City to view CIP projects in an interactive format that can be customized to include project details and assist with integrating project priorities with multiple systems. This web application provides critical background information, project phasing, costs, and project specifics such as future user cost allocations. The City's StoryMap will allow users to zoom into specific project locations within the service area, which will assist City staff in facilitating discussions with council members or stakeholders.

Deliverables for Task 9.3: StoryMap data files (electronic)

### TASK 9.3 | RECYCLED WATER HYDRAULIC MODEL UPDATE AND ANALYSIS

If required, BC staff will request a copy of the latest recycled water mode from City staff to confirm system sizing for the future recycled water alternatives. BC staff will review the latest model and GIS to confirm the level of effort. For budgeting purposes, 40 hours have been included to update the model to mimic existing condition. If additional time is required based on the review, BC will discuss with City staff prior to proceeding. The remaining effort will include the development of scenarios based on the recycled water evaluation performed.

Deliverables for Task 9.3: Updated Recycled Water Model (electronic file) and System Analysis Figures and Results (electronic format)

### TASK 9.4 | AS-NEEDED SERVICES

To support the City staff will follow up tasks and modeling troubleshooting, up to \$17,961 has been included as an optional task. Tasks may also include performing supplemental hydraulic modeling analysis for system optimization alternatives, funding support, or supplemental field work.

## Schedule of Charges/Payments

[illegible]

